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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/634,369

08/06/2003

Paul S. Thompson

2924

32104 7590 04/04/2007  
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EXAMINER

ALI, SHUMAYA B

ART UNIT

PAPER NUMBER

3771

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/04/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/634,369	<b>Applicant(s)</b> THOMPSON, PAUL S.	
	<b>Examiner</b> Shumaya B. Ali	<b>Art Unit</b> 3771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-13 and 15 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-13,15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                      | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Allowable Subject Matter*

The indicated allowability of claim 2,6-9,12-15 is withdrawn upon reconsidering the amendments filed on 9/27/06 and the newly discovered reference(s) to Salter US 4,106,505. The Examiner apologizes for the inconvenience. Rejections based on the newly cited reference(s) follow.

### *Response to Arguments*

Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Salter et al. US 4,106,505.**

**As to claim 1**, Salter discloses a nasal cannula assembly designed for contact with the nasalabial area of a patient's nose and comprising a hollow tubular member (12), having a central portion of sufficient length to span the width of an average patient's nostrils (see fig.1, a central portion is located between nasal prongs 14 and 15) and end portions extending from each end of said central portion (see fig.2), said central portion having a pair of spaced, hollow extensions (14,15) integral with and projecting therefrom said hollow extensions terminating in

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gas directing orifices and which hollow portion of said extensions communicate with said hollow main body portion (13), said central portion lying in a first plane (see labeled fig.3, attached below) with longitudinal axes symmetrical about a midpoint and forming an angle in said first plane less than 160 degrees, each said hollow extension having a longitudinal axis projecting from said central portion at an arcuate angle (see col.2, lines 25-27; labeled fig.2, attached below) from said first plane, said gas directing orifices of said hollow extensions having a longitudinal axis lying in a second plane (see labeled fig.3, attached below) essentially parallel to and displaced from said first plane, said end portions of said central portion lying in essentially the first plane with longitudinal axis of said end portion essentially collinear with longitudinal axis of corresponding symmetrical half of said central portion (see labeled figs.2 and 3, attachment below), said end portion of said central portion laying in essentially the first plane with longitudinal axis of said end portion essentially collinear with longitudinal axis of corresponding symmetrical half of said central portion (see fig.2).

**As to claim 2**, Salter discloses where in said hollow extensions terminate in said gas directing orifices where thickness of material forming rim of said orifices is less than 0.006 inches (see figs. 2 and 4).

**As to claim 3**, Salter discloses wherein longitudinal axis of each said gas-directing orifice angled acutely in said second plane toward second said gas directing orifice (see labeled figs. 2 and 3, attached below).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 4,6,7,9,10,12,13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salter US 4,106,505.**

As to claims 4 and 10, Salter discloses a nasal cannula assembly (fig.2, 12) designed for contact with the nasalalabidial area of a patient nose, however lacks at least one support tube having a 10% tensile modulus less than 200 psi. However, the Applicant has not established why the specific tensile strength is critical to the invention in terms of proving a specific function or solving a stated problem. Therefore, one of ordinary skill in the art would consider Salter's flexible cannula (see col.2, line 1) to meet the claimed limitation since it has been held to be within the general skill of a worker in the art to select a flexible material to construct nasal cannula to prevent damage of the tissue at the nasalalabidial area.

As to claims 6 and 12, Salter lacks wherein said support tubes have a compression set less than 45% at 23 degrees C per ASTM D-395. However, Salter teaches a flexible tube (see col.2, line 1), therefore, Salter teaches the tube can be compressed to certain degrees.

Furthermore, specific degrees and compression as claimed are consider a matter of design choice

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depending on the manufacturer because a product can be manufactured using different steps. Therefore, different manufacturer can use different compression and/temperature to yield a common product. Therefore, it would have been obvious matter of design choice modify Salter to obtain the claimed invention as specified in claim 6.

As to **claims 7 and 13**, Salter lacks wherein said support tubes have a brittle temperature less than  $-40$  degrees C per ASTM D0746. However, Salter's tube can be brittle at some temperature. Furthermore, a specific degree as claimed is considered a matter of design choice depending on the manufacturer because a product can be manufactured using different steps. Therefore, different manufacturer can use different brittle temperature to yield a common product. Therefore, it would have been obvious matter of design choice modify Salter to obtain the claimed invention as specified in claim 7.

As to **claims 9 and 15**, Salter teaches wherein said support tubes are manufactured from a polyninyl chloride compound (see col.2, liens 1-3), however, Salter lacks at least a portion of polyvinyl chloride resin having an average molecular weight of at least about 100,000. However, Applicant has not established why the molecular weight as claimed is critical to the invention in terms of providing a specific function and solving a stated problem. Furthermore, one of ordinary skill in the art would consider the claimed molecular weight as a matter of design consideration because the molecular weight would vary between different sizes of the tube. Therefore, it would have been obvious matter of design choice to modify Salter to obtain the invention as specified in claims 9 and 15.

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**Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salter US 4,106,505 in view of Gunaratnam et al. US Patent Application Publication 2004/0226566**

As to claims 5 and 11, Salter lacks the support tubes having a hardness between 40 and 75 Shore A, however Gunaratnam teaches a flexible tubing with Shore A hardness between 50-60 (see 0304). Therefore, it would have been obvious to one of ordinary skills in the art at the time the invention was made to modify the cannula assembly of Salter to provide the harness as claimed in order to facilitate swiveling movement of the tube as taught by Gunaratnam (see 0304 of Gunaratnam).

### *Specification*

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the abstracted filed on 9/27/06 exceeds 150 words in length. Correction is required. See MPEP § 608.01(b).

### *Claim Objections*

Claim 1 is objected to because of the following informalities: (1) Applicant is respectfully requested to relocate the recitation of "Having thus described...US. Letter Patent is" before the text of claim 1, because having that recitation as is states that said recitation are being

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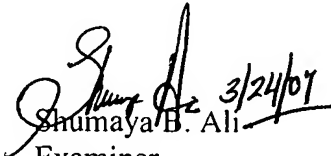
limited by claim 1, which may not be the case, and (2) in line 9, the term "said hollow main body portion" lacks antecedent basis. Appropriate correction is required.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shumaya B. Ali whose telephone number is 571-272-6088. The examiner can normally be reached on M-W-F 8:30am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on 571-272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

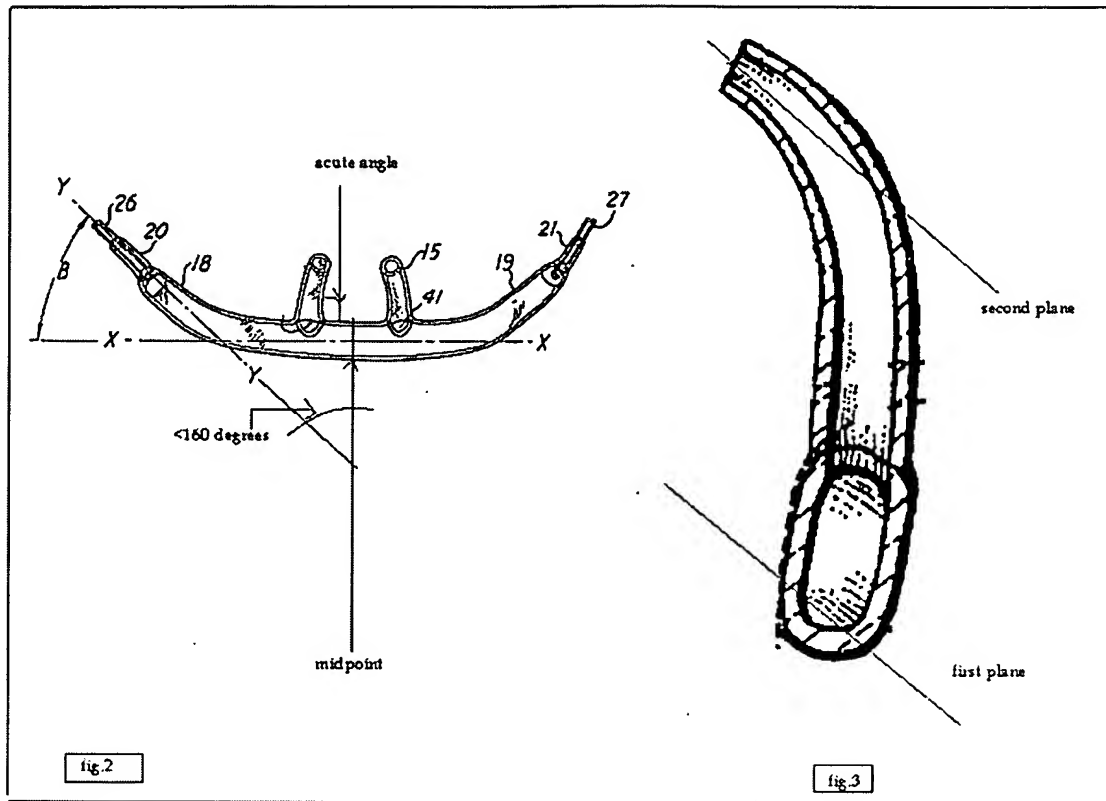
  
Shumaya B. Ali  
Examiner  
Art Unit 3771

  
JUSTINE R. YU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700

3/27/07



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Prior Art  
US 4,106,505

*Shungu H.*  
3/24/07